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July 28, 2003

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Marlene H. Dortch, Secretary
Federal Communications Commission
Portals II, Filing Center, TW-A325
445 12th Street, S.W.
Washington, D.C. 20554

Re: ET Docket No. 03-104

Dear Ms. Dortch

Transmitted herewith, on behalf of The Herald Broadcasting Syndicate, licensee of International Broadcast Station WSHB, Cypress Creek, South Carolina, are the original and five (5) copies of its Comments in the above-referenced Notice of Inquiry proceeding.

Should you have any questions with respect to this filing, please contact the undersigned.

Very truly yours

Jerold L. Jacobs

Enc.

cc: Anh Wride (FCC Office of Engineering and Technology w/enc.)

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Inquiry Regarding Carrier Current Systems	)	**ET Docket No. 03-104**
including Broadband Over Power Line Systems	)	
	)	
	)	

COMMENTS

Introduction

These comments are submitted on behalf of The Herald Broadcasting Syndicate, Inc., which operates the FCC-licensed, privately owned shortwave station WSHB, Cypress Creek, South Carolina.

The Commission has requested information and data regarding issues related to Broadband over Power Lines systems (BPL) as part of its consideration of changes to Part 15 of the Commission's rules in order to facilitate the deployment of this technology. WSHB feels strongly that before BPL, or any other developmental technology, is authorized by the Commission, existing proven frequency applications must be provided maximum protection to prevent damaging interference with existing uses. To provide this level of protection, the Commission should strengthen Part 15 rules rather than ease them in the face of developmental technologies such as BPL. Because WSHB believes BPL to be a disruptive technology that significantly interferes with many existing radio applications now in use in the bands between 2 and 30 MHz, **WSHB believes that BPL should NOT be allowed at this time**.

Technical/Interference Concerns

Under consideration are two different BPL technologies: Access and In-House. Both systems employ multiple carrier signals spread over a broad range of frequencies. The conducted energy from a BPL system causes harmful interference to radio communications via two possible paths. First, the RF energy is carried through electrical wiring to radio receivers connected to the electrical wiring. Second, at frequencies below 30 MHz, where wavelengths exceed 10 meters, long stretches of power line wiring will act as an antenna, permitting the BPL RF energy to be radiated over the airwaves. Thus, it would have the effect of raising the already high noise floors for radio reception. And, since there is relatively low propagation loss at these frequencies, such radiated energy would cause harmful interference to portable or mobile radio receivers, even those at a considerable distance from the power lines.

Accordingly, WSHB believes that the adoption of a BPL system in the United States, using wide spectrum techniques from 4.5 MHz to 21 MHz, would result in the *de facto* "jamming" of international shortwave broadcasts intended for listeners in the United States, contrary to requirements mandated by treaty with the ITU to protect the reception of radio broadcasts from abroad and to limit or remove any sources of interference with such reception. Furthermore, certain studies[1/] indicate that this system results in harmful interference to authorized domestic operations that include fixed, land mobile, aeronautical mobile, maritime mobile, radiolocation, broadcast radio, amateur radio terrestrial and satellite, and radio astronomy.

1/ "Power Line Communications: a Threat for Radio Listening?," Prof. Filippo Gianetti, Universita degli Studi di Pisa; "Physical and Regulatory Constraints for Communication of the Power Supply Grid," M. Gebhardt, F. Weinmann, and K. Dostert, University of Karlsruhe.

Results of these studies, conducted in Europe and Japan, raise significant concerns regarding the viability of BPL in light of the above issues. In Japan, the decision was made in 2002 to disallow BPL as a suitable system for data transmission. The measured effect of interference in test cases there, plus a study conducted by Professor Filippo Giannetti of the University of Pisa[2/], convinced Japanese authorities to reject BPL as an acceptable system. Concerns have also been raised in Europe regarding the detrimental effects of BPL on radio communications. DRM (the international consortium that has created a universal digital radio system for AM frequencies below 30 MHz -- the leading digital methodology for the future of radio) has expressed strong concerns, as have the European DX Council, the Radio Society of Great Britain (http://www.rsgb.org/emc/pltnew.htm), and the Austrian Amateur Radio Society (http://www.powerline-plc.info/video).

The European Broadcast Union has also developed a proposal on BPL systems and their emissions. This EBU proposal was first presented as a report to the DRM membership and can be found at http://www.bbc.co.uk/rd/pubs/whp/whp013.html. It was developed by Jonathon Stott of the BBC Research and Development Group. The BBC and its broadcasting arm, VT Merlin, are very pro-active in their objection to any relaxation of interference mediums to the broadcast bands, and this report clearly demonstrates that BPL systems are a serious threat to broadcasting.

Public Safety Concerns

Many of the authorized services noted above play an important role in Homeland Security, and would be severely compromised by interference from BPL. These services

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[2/]See(http://www.edxc.org/modules.php?op=modload&name=Sections&file=index&req=viewarticle&artid=1&page=1)

currently provide reliable and proven methods of communication when other means of communication have been disrupted. It would be extremely unwise to introduce any new source of potential interference that might have an adverse effect on these communications. This effect would be quite noticeable in both urban and rural settings and imposes on *everyone* served by the power line, whether they receive the service or not.

Recommendation

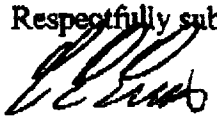
WSHB recommends that operable BPL systems be required to demonstrate, and the FCC certify, that the magnetic field of the emissions is 0 dBu V/m, measured at a distance of one meter, in a bandwidth of 9 kHz, and utilizing a peak detector. This is the only standard that can guarantee adequate protection to the radio spectrum from 2 to 30 MHz against BPL interference.

Conclusion

WSHB believes that it will be impractical, if not impossible, to develop standardized measurement techniques to ensure interference compliance at any protection level that the Commission may adopt for BPL systems. BPL systems use electrical wiring within a building as the means to transmit data; consequently, the impedance of the building system changes every time a device or appliance is added, removed, or turned off or on. Such a widely fluctuating environment makes modeling of any such system extremely difficult, if not impossible. Radiated emissions from the RF energy imposed on the building's electrical wiring would vary from location to location based on each building's wiring and power requirements. As the building wiring would also serve as an antenna, that wiring structure would also have to be accounted for in any evaluation methodology. Certainly, measurements derived in any laboratory setting would be invalid, as each system would constitute a unique set of parameters to be measured and evaluated.

Accordingly, WSHB believes that BPL systems jeopardize the current use of the radio bands between 2 and 30 MHz. We support Commissioners Copps and Adelstein, who have wisely expressed concerns about BPL interference to other licensed radio spectrum users in these bands. We encourage the FCC to look beyond the attractiveness of BPL, to conduct a thorough examination of the science, to recognize the collateral damage caused by BPL, and to provide maximum protection to proven existing radio applications.

Respectfully submitted,



C. E. Evans
WSHB Station Manager

On behalf of
The Herald Broadcasting Syndicate, Inc. -
IHF WSHB, Cypress Creek, South Carolina

Dated: July 25, 2003